

J. F. McELROY.
ELECTRIC BUZZER.
APPLICATION FILED SEPT. 16, 1909.

963,238.

Patented July 5, 1910.

FIG. 1.

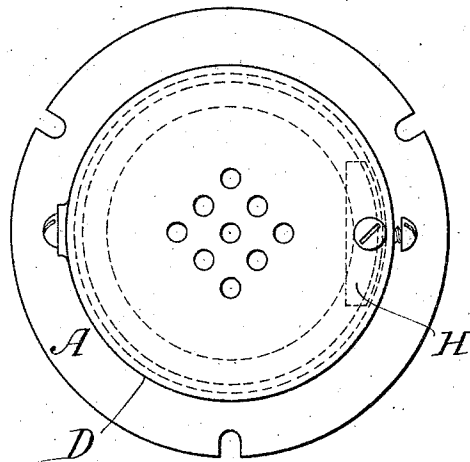
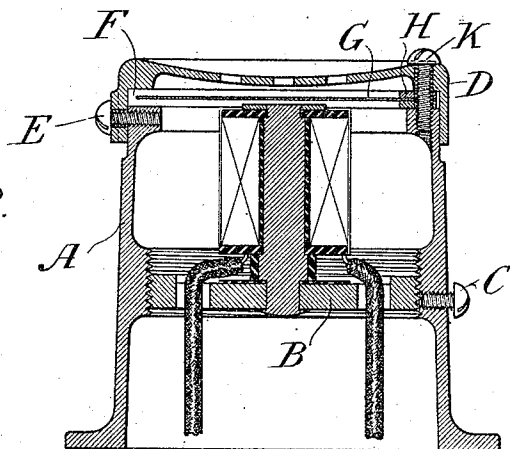


FIG. 2.



Witnesses
L. T. Shaw
J. L. Trautler.

by

Inventor
James F. McElroy
E. M. Brantley

Att

UNITED STATES PATENT OFFICE.

JAMES F. McELROY, OF ALBANY, NEW YORK, ASSIGNOR TO CONSOLIDATED CAR HEATING COMPANY, A CORPORATION OF WEST VIRGINIA.

ELECTRIC BUZZER.

963,238.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed September 16, 1909. Serial No. 517,960.

To all whom it may concern:

Be it known that I, JAMES F. McELROY, a citizen of the United States, residing at Albany, county of Albany, State of New York, have invented certain new and useful Improvements in Electric Buzzers, the following being a full, clear, and exact disclosure of the one form of my invention which I at present deem preferable.

For a detailed description of the present form of my invention, reference may be had to the following specification and to the accompanying drawings forming a part thereof, in which—

Figure 1 is a plan and Fig. 2 is an axial section of my device.

My invention relates to an electric buzzer and particularly includes means for increasing the intensity of the sound by securing the diaphragm at one point and permitting its edges to vibrate in a circular recess against the sides of which the diaphragm may strike. I also provide a perforated cover above the diaphragm.

Referring to the drawing, A represents a casing of a general cylindrical form with an intermediate partition B about half way of the length of the casing and screwed into an internal screw-threaded bearing in which it is fixed by a set-screw C. On the said partition B is seated a magnet, the core of the magnet being magnetically connected with the metal of the casing which forms a continuation of the magnetic circuit. The casing A is provided with a cover plate D which is secured to the casing by a screw E in such a way as to leave between the inside of the cover and the outside of the end of the casing a circular recess or channel F. The top portion of the cover is depressed as shown in Fig. 2 and provided with a series of perforations.

Immediately under the cover plate and above the magnet pole is placed a diaphragm of soft steel G. This diaphragm is illustrated as circular in form and secured in place by means of a clip H attached to one point in the circumference of the disk and fitting into one point of the circumference of the said channel or recess F, where it is secured by a screw K. The diaphragm has a diameter slightly less than the internal

diameter of the aforesaid recess or channel F. Hence, when the diaphragm is in position above the magnet, and is set into vibration by current pulsations in the magnet its vibrations will cause it to strike the sides of the channel or recess F, whereby the sound is intensified. In connection with this the sound is further increased by providing the perforations in the cover plate D.

What I claim as new and desire to secure by Letters Patent is:

1. An electric buzzer comprising a magnet, a circular diaphragm arranged to be vibrated by said magnet, a supporting clip engaging said diaphragm at one point in its circumference, and an external part overhanging the edge of said diaphragm and within range of the vibrations of the circumference thereof.

2. An electric buzzer comprising a casing, a magnet mounted therein, a circular diaphragm arranged to be vibrated by said magnet, a supporting clip engaging said diaphragm at one point in its circumference, said casing being provided with a circular recess or channel inclosing the edge of the diaphragm and within range of the vibrations of the circumference thereof.

3. An electric buzzer comprising a casing, a magnet mounted therein, a circular diaphragm arranged to be vibrated by said magnet, a supporting clip engaging said diaphragm at one point in its circumference, said casing being provided with a circular recess or channel inclosing the edge of the diaphragm and within range of the vibration of the circumference thereof, said casing being also provided with perforations opposite said diaphragm.

4. An electric buzzer comprising a magnet, a circular diaphragm arranged to be vibrated by said magnet, a supporting clip engaging said diaphragm at one point in its circumference, and an external part overhanging the edge of said diaphragm and within range of the vibrations of the circumference thereof, and means for effecting a relative adjustment of said magnet and said diaphragm.

5. An electric buzzer comprising a casing, a magnet, a support for said magnet adjustably mounted in said casing, a circular dia-

phragm arranged to be vibrated by said magnet and supporting means engaging said diaphragm at one point in its circumference, said casing being provided with an annular shoulder overhanging the edge of said diaphragm and within the range of vibration of the circumference thereof.

In witness whereof I have hereunto set my hand before two subscribing witnesses, this 13th day of September, 1909.

JAMES F. McELROY.

Witnesses:

BEULAH CARLE,
JOHN M. ESTERLY.